



City of Annapolis

Department of Neighborhood & Environmental Programs
145 Gorman St, 3rd Floor
Annapolis, MD 21401-2517

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April 4, 2016

Roy C. Little, P. E.
Terrain Inc.
106 Old Solomons Island Road
Annapolis, Maryland 21401

RE: Forest Conservation Plan
9 Elliott Road

Dear Mr. Little;

Following are staff comments regarding the Forest Conservation Plan for 9 Elliott Road:

Neighborhood and Environmental Programs:

1. The sizing for ESDv shows a PE of 1.6" from Table 5.3. For HSG C soils and 45.65% Impervious, the PE should be 1.8"
2. The tables included in the stormwater management report were very confusing to follow. For example the ESD volume provided by bio-retention area #2 shows three lines of data for micro-bioretenction #2. The ponding depth is shown as 0 for two of these lines and 0.75 in the third line. The first two lines show media, stone, sand layers. The first line states 7.00 and it is not clear if this is in feet or inches. The second line has 1.50 and is not clear the units. Please provide something that is more clear to be reviewed. If you would like to meet to go over what is anticipated, please contact Matt Waters. As a general guidance, please see the publication from MDE entitled "Environmental Site Design (ESD) Process and Computations, July 2010."
3. The area called out for sheetflow to conservation #1 cannot be included as an acceptable ESD practice for this project. The conservation area needs to be at least 20,000 SF with a minimum effective width of 50 feet. The area is called out to be 24,139 SF, but that includes areas that are not receiving sheetflow for this credit. The area sheetflow to conservation is roughly scaled to be 170 feet by 30 feet, which is only 5,100 SF.
4. The only stormdrain systems that appear to be shown on these plans is one that connects Bioretention area 3 to bioretention area 2 and one that takes the overflow from bioretention 2 to an existing stormdrain system near August Drive. Are these the only stormdrains needed for this project?



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5. The proposed drainage area map on sheet 2 shows the same areas as the existing drainage area map on the same sheet. The proposed contours shown will change these areas.
6. No preliminary data about the drainage areas have been provided like time of concentration paths and flow rates at the study points.
7. There is a drainage area shown between drainage area 2 and 2A that is not labeled and does not have a study point.
8. Drainage area 3 and 4 do not have any ESD practices except for a small portion of proposed grass swale 3, which crosses drainage areas 1 and 2.
9. Proposed grass swale 5 appears to outfall towards Hilltop Lane. Does this reach an existing stormdrain system?
10. Near proposed grass swale 2 there is a label for proposed grass swale 1 without a leader. Please verify the location of swale 1.
11. Tree replacement will be according to the mitigation table in City Code, 17.09.070 and will be reflected in the landscape plan.

Planning and Zoning:

1. Critical Root Zone (CRZ) should be more accurately delineated for the specimen trees, especially where individual trees and clusters may be saved.
2. Specimen trees and tree clusters to be saved have too much disturbance within the CRZ.
3. Investigate the possibility of aligning the entrance drive across from the Tyler Avenue intersection.
4. Units along Hilltop Lane shall mimic the established street setback.
5. Units adjacent to Hilltop Lane shall front onto Hilltop.
6. In general, the site plan appears overly dense.
7. The site design should establish meaningful and functional open spaces, including recreations spaces.
8. The stormwater management concept shall become part and parcel of the site landscape, part of a functional and aesthetic garden.

Please contact me if you have any questions.

Sincerely,

Frank Biba, AICP, LEED AP
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fjb@annapolis.gov

cc: Maria Broadbent
Peter Gutwald